NATIONAL SYNCHROTRON LIGHT SOURCE
SAD RISK ASSESSMENT

APPENDIX 4

INTRODUCTION

The analyses in this section review the credible accidents associated with the hazards present within the NSLS workplace. These assessments estimate risks associated with the hazard with and without mitigation, and identify the controls that are in place to reduce the risk of the hazard. The assessment categories are summarized below and are based on information from the Hazard Analysis Subject Area .

Consequence

High: Can a radiological or chemical hazard cause multiple deaths or serious injury, off-site evacuation, >100 Rem to an individual, > $1,000,000 damage, > 4 mos. facility downtime, total loss of mission data, or have a public impact that closes the Department buildings or a User Facility?

Moderate: Can a radiological or chemical hazard cause a death or serious injury, >25 Rem to an individual, > $250,000 damage, 3 weeks to 4 months program downtime, severe loss of experimental data, or have a public impact that closes down an experiment or program?

Low: Can a radiological or chemical hazard cause multiple moderate injuries, local evacuation, > 5 Rem to an individual, > $50,000 damage, 4 days to 3 weeks program downtime, major loss of experimental data, or have a public impact that brings the experiment to the attention of the community and activist groups?

Routine: Can a radiological or chemical hazard cause minor injuries, no on-site or off-site evacuation, < 2 Rem to an individual, < than $50,000 damage, < 4 days program downtime, minor loss of experimental data, or have a public impact that is below public perception?

Probability

Frequent: Likely to occur repeatedly in life cycle.
Probable: Likely to occur several times in life cycle
Occasional: Likely to occur some time in life cycle
Remote: Unlikely to occur in life cycle but possible
Ext. Remote: Likelihood of occurrence ~zero
Impossible: Physically impossible to occur

Risk Category (= Consequence x Probability)

High: High x Frequent, High x Probable, High x Occasional, Moderate x Frequent, Moderate x Probable

Moderate: High x Remote, Moderate x Occasional, Low x Frequent, Low x Probable

Low: High x Ext. Remote, Moderate x Remote, Moderate x Ext. Remote, Low x Occasional, Low x Remote

Routine: High x Impossible, Moderate x Impossible, Low x Ext. Remote, Low x Impossible, Routine x Frequent→Impossible